Lactococcus lactis bacteriophages: phage-host interaction and phage transduction

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1. Bacteriophages belonging to species rarely encountered in dairy environments should receive greater scientific attention as they can provide useful information for dairy process implementation and teach us valuable lessons on phage evolution and adaptation. *This thesis.*

2. Despite the scientific community having always advocated the approval of utilization of GMOs in the European food market, this still seems to be difficult to achieve. The most rational foreseeable future should aim at overcoming this legislative obstacle. *This thesis.*

3. There is an urgent need for the development of phage-specific bioinformatics tools for the analysis of the increasing amount of *in silico* data. *This thesis*

4. The under-investigated carrier state life cycle (CSLC) might influence the output of many phage infection experiments more than currently acknowledged. *This thesis.*

5. A better understanding of the carrier state life cycle (CSLC) could improve the outcome of phage therapy approaches or even avoid unwanted results.

6. Researchers analyzing the host range of new bacteriophages should be more aware of the false positive results that can be obtained when only testing undiluted lysate samples. *This thesis.*

7. Studies on bacteriophage insensitive mutants (BIMs) isolated from the same factory or from factories that employ very similar protocols might tell only half the story. *This thesis.*

8. The renewed research attention on bacteriophages, mainly driven by their potential as alternatives for antibiotics against multidrug resistant bacteria, sadly reflects how superficially scientists' opinions are often taken into consideration by society.

9. It is remarkable how little bacteriophages are taken into account when interpreting research results considering that they are the most abundant biological entities in the biosphere.

10. In scientific research, neither the degree of intelligence nor the ability to exactly execute and complete the task undertaken are the essential factors for success and personal satisfaction. Total dedication and the enduring of the difficulties are more important: in this way we can face problems that others, more critical and acute, would not face. *Dott. Rita Levi Montalcini. Medicine Nobel prize winner.*